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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,723	06/11/2001	Jae Park	FJPR-164XX	2064
207	7590	12/08/2004	EXAMINER	
WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP			IYER, RAMAKRISHNA R	
TEN POST OFFICE SQUARE			ART UNIT	
BOSTON, MA 02109			PAPER NUMBER	
			2663	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,723

Applicant(s)

PARK ET AL. 

Examiner

Raju Iyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6-8, 18, and 22-24 is/are rejected.
- 7) ☐ Claim(s) 2-5, 9-17, 19-21 and 25-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/17/01</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of the following informalities:
 - a. The term "segments frame" in line 11 appears to be in error. It needs to be changed to either "frame segments" or "segments", or a similar expression.
 - b. The term "payloads of at least another channel" in lines 13/14 is confusing; a revised wording such as "payload of this channel and at least one other channel" may be appropriate.

Correction is required. See MPEP § 608.01(b).

2. The specification of the disclosure is objected to because of the following informalities:
 - a. The term "glass fiber" (line 28, page 1) should preferably be worded as "optical fiber".
 - b. "It has been known to employ a protocol..." (Page 3, line 29) should be changed to "A protocol.... has been employed" or a similar sentence.
 - c. "It has also been known to employ a number of links..." (Page 4, line 21) should be changed to "Employing a number of links to ...is also known..." or a similar sentence.

Appropriate correction is required.

Claim Objections

3. Claim 2 is objected to because of the following informalities:
- The terms "...transmitted as corresponding sets of payloads of at least two channels.." and "...carried in payloads of only a single one of the two at least two channels..." is confusing and indefinite. The difference between the terms "transmitted" and "carried" is not clear in the claim language. If the intent is to claim "multiplexing over multiple channels in time" (as outlined in the specification), it needs to be stated more clearly.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. Claims 1, 6 – 8, 18, and 22 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,678,474 (“Masuda et al”), in view of US Patent Application Pub. No. US2001/0036185 (“Dempo”).

7. Regarding Claims 1 and 18, Masuda et al disclose a “lightwave network data communications system” wherein IP packets received from a subscriber are encapsulated into a point-to-point “lightwave adaptation frame” (ADP Frame) with an “ADP frame header” (Col. 7, lines 59-64). Masuda et al also disclose that the frame header contains payload length information (Fig. 6 and Col. 8, lines 40-45), and that the ADP frame is transferred over the optical network using at least one superframe of a fixed length (Col. 10, lines 16 – 21). Masuda et al also disclose the receiving process wherein the superframe is “de-capsulated” and the data IP packet is recovered from the frame (Col. 15, line 64 to Col. 16, line 35).

Masuda et al do not specifically teach dividing each frame into multiple fixed size segments.

Dempo, in his invention discloses the method for converting a packet with a header portion into a packet with multiple fixed size segments, with the first segment carrying the header information contained in the input packet (Fig. 2a & 2b, paragraphs 31 – 35, page 2/3).

A person of ordinary skill in the art would have been motivated to employ Dempo in Masuda et al, since there is a need to break down a large input packet (like a large ADP frame disclosed by Masuda et al) into smaller fixed size

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segments (payload) that can fit into a fixed narrow bandwidth channel (e.g. one VT or less) defined in the Synchronous Transport Signal of a SONET frame.

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to combine Masuda et al with Dempo (collectively "Masuda-Dempo") to obtain the invention as specified in Claim 1 and Claim 18.

8. Regarding Claims 6, 7, 22 & 23, Masuda-Dempo disclose all the limitations of the claim as applied to Claim 1 and 18 above (paragraph 7), and further, Masuda et al teach the concept of "superframes" (Fig. 14, 15; Col. 17, lines 45-50), wherein different IP packets are aggregated in a superframe to "reduce overhead processing" (Col. 18, lines 47-54) and plurality of packets (with their own headers and end-points) are merged into a single superframe as a "transfer container for aggregated flow" (Col. 18, line 8 – 14).

9. Regarding Claims 8 and 24, Masuda-Dempo disclose all the limitations of the claim as applied to Claim 1 and 18 above (paragraph 7), and further Masuda et al disclose the process for regenerating the transmitted packets by referring to the "payload length" value of the frames and "identifying a delimitation" of the packet in the frame (Col. 16, lines 25 –35).

Allowable Subject Matter

10. Claims 3 – 5, 9 – 17, 19 –21, and 25 –33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

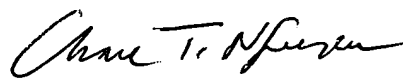
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see attachment).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raju Iyer whose telephone number is (571) 272 6047. The examiner can normally be reached on weekdays from 7.00 a.m. - 4.00 p.m., except every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Raju Iyer

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